supporting information for

Self-healing hydrogel sensors with multi-shape memory properties for human motion monitoring

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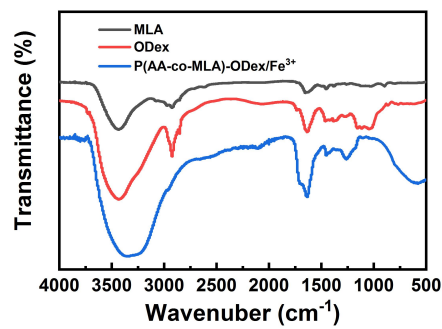
b Institute of Intelligent flexible Mechatronics, Jiangsu University, Zhenjiang, 212013, China.

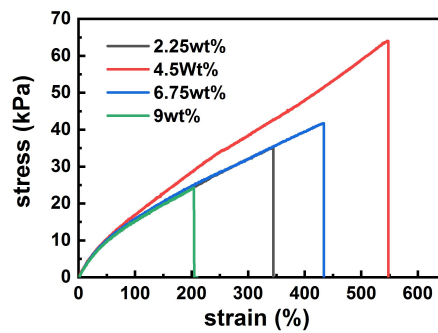† These authors contributed equally to this work.
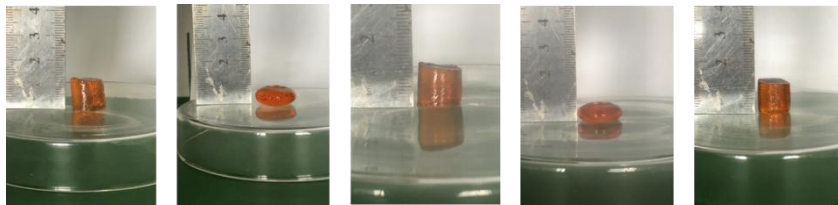
* Email: dingjn@ujs.edu.cn; nyyuan@cczu.edu.cn.
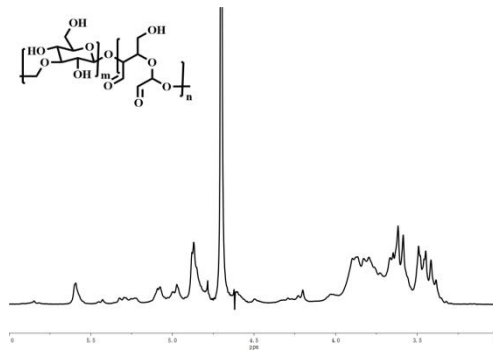
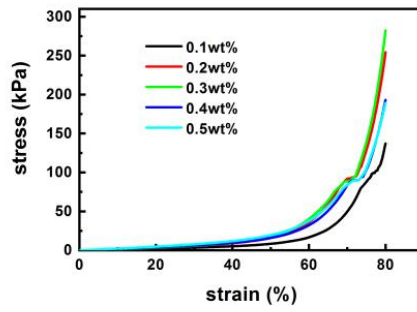**S1. ^{1}H NMR spectrum of the oxidized dextran (Odex) in D$_2$O.**

S2. FTIR spectra of P(AA-co-MLA)-ODex/Fe^{3+} hydrogel, MLA and ODex.
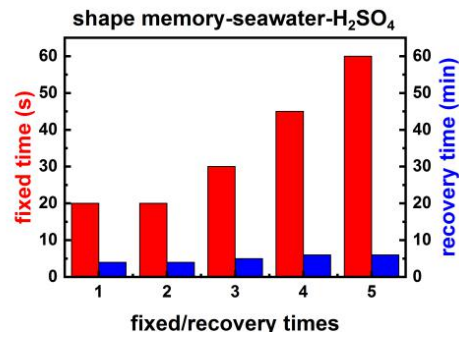

S3. Tensile properties of hydrogels with various contents of ODex.

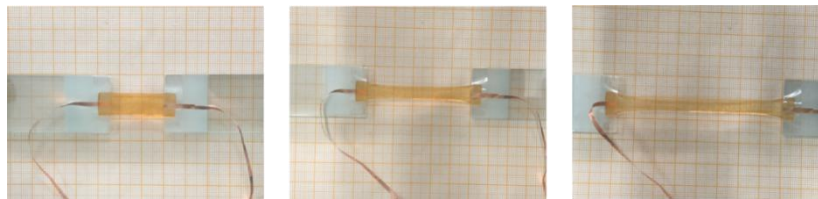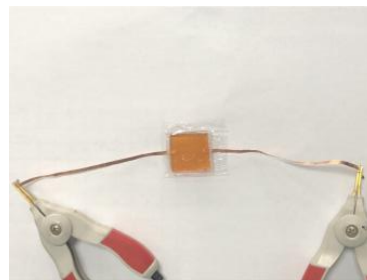**S4. Schematic diagram of hydrogel compression and recovery.**

S5. Compression properties of hydrogels with different Fe^{3+} contents.
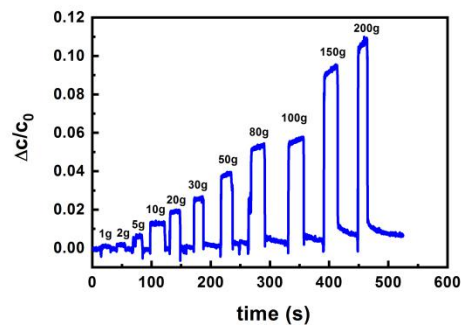

S6. Shape memory effects of hydrogels in seawater.

S7. Schematic diagram of resistance sensor increasing with tensile strain.

S8. capacitive pressure sensor.

S9. Variation of the relative capacitance under various loads.